Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Previously presented) A method for controlling a laser, the method comprising:

generating a data signal;

generating a test signal having a level commensurate with a noise level;

modulating a laser bias current with both the test signal and the data signal to produce a modulated laser output;

generating a modulated laser signal from the modulated laser output;

multiplying the modulated laser signal by a sine function of the test signal to generate a first product;

squaring the first product to generate a first squared product;

multiplying the modulated laser signal by a cosine function of the test signal to generate a second product;

squaring the second product to generate a second squared product;

adding the first squared product and the second squared product to generate an extracted test signal;

determining an average value of the extracted test signal;

calculating a laser bias current adjustment from the average value of the extracted test signal; and

applying the calculated laser bias current adjustment to the laser bias current.

3 (Previously presented): The method of claim 2, wherein the test signal is a sinusoidal signal.

4 (Previously presented): The method of claim 2, wherein the test signal is a saw tooth signal.

5. – 14. (Canceled)

15. (Previously presented) The method of claim 2, further comprising:

calculating a modulation current adjustment from the extracted test signal; and

applying the calculated modulation current adjustment to the laser.

16.- 26. (Canceled)

27. (New) A system comprising:

means for generating a data signal;

means for generating a test signal having a level commensurate with a noise level;

means for modulating a laser bias current with both the test signal and the data signal to produce a modulated laser output;

means for generating a modulated laser signal from the modulated laser output;

means for multiplying the modulated laser signal by a sine function of the test signal to generate a first product;

means for squaring the first product to generate a first squared product;

means for multiplying the modulated laser signal by a cosine function of the test signal to generate a second product;

means for squaring the second product to generate a second squared product;

means for adding the first squared product and the second squared product to generate an extracted test signal;

means for determining an average value of the extracted test signal;

means for calculating a laser bias current adjustment from the average value of the extracted test signal; and

means for applying the calculated laser bias current adjustment to the laser bias current.

28. (New) The system of claim 27, wherein the means for generating the test signal comprises means for generating a sinusodial signal.

29. (New) The system of claim 27, wherien the means for generating the test signal comprises means for generating a saw tooth signal.

30. (New) The system of claim 27, further comprising:
means for calculating a modulation current adjustment from the extracted test signal; and
means for applying the calculated modulation current adjustment to the laser.